

Work Order ID 66298

February 9, 2011 11:57:32 AM



Page 1

Item ID: D2500-3-100

Accept



Setup Start



Revision ID:

Stop



Item Name: Ext'n - 'I' Beam Web 4"

Start Date: 2/09/11 Start Qty: 167.00



Cust Item ID:

Required Date: 3/25/11 Req'd Qty: 167.00



Customer:

Reference:

Approvals: Process Plan: CL Date: 11/02/09 Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D2500	Rev H

100 PURCHASING 0.00



Purchasing

Memo

Issue P/O:

13459

0.00

- a) Extrude as per Dwg D2500
- b) Material: 6061-T6 (QQ-A-200/8)
- c) Minimum yield tensile strength = 35 ksi
- d) Minimum ultimate tensile strength = 38 ksi
- e) Minimum elongation = 8%
- f) Order at 100" long
- g) Caradon Indalex Tool # MS-18867
- h) To be packed per DSK 066
- i) Pull test to ASTM standard B221 required.
- j) Material certification is required

CL 11/02/09 167

110 Receive & Inspect for Damage & Mat'l Certs 0.00



Packaging

Memo

Ensure material certification is attached

0.00

CL 11/02/09 167

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP	Description of NC Section A	Corrective Action		Section B		Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng		Sign & Date			

NOTE: Date & initial all entries

Work Order ID 66298

February 9, 2011 11:57:32 AM



Page 2

Item ID: D2500-3-100

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Setup Start



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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 QC Quality Control	QC6- Inspect dimensions to drawing Memo Check Pull test per Dwg D2500 for compliance page attached. Check hardness with Webster tester	0.00 0.00		Sub 66		(x167)			
130 Packaging Packaging	Identify as per dwg & Stock Location: LG Memo	0.00 0.00				B11-5-6		(167)	
140 QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.00							11/4/6 CME 11-04-06

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP	Description of NC Section A	Corrective Action		Section B		Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng		Sign & Date			

*NOTE: Date & initial all entries

Picklist Print

Page 1

February 9, 2011 11:57:32 AM

Work Order ID: 66298



Parent Item: D2500-3-100



Parent Item Name: Ext'n - I' Beam Web 4"


Start Date: 2/09/11

Required Date: 3/25/11

Start Qty: 167.00

Required Qty: 167.00

Comments: IPP: E 02.09.10 Added DSK 066 KJ
IPP F 07.07.06 rev G dwg EC IPP Rev:G as per
dwg revH DD 10.02.23 verified byEC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2500-3-100P  Ext'n - I' Beam Web 4"		Purchased	No			110	Each	0.0000	1	167		2/11/11 (167)	

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP	Description of NC Section A	Corrective Action		Section B		Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng		Sign & Date			

NOTE: Date & initial all entries

SPECIFICATION CONTROL DRAWING

D2500-1-XXX EXTRUSION & D2500-3-XXX EXTRUSION

NOTES:

1) MATERIAL: 6061-T6 ALUMINUM PER QQ-A-200/8 OR AMS-QQ-A-200/8 OR ASTM B221

MINIMUM TENSILE YIELD STRENGTH = 35 KSI
MINIMUM ULTIMATE TENSILE STRENGTH = 38 KSI
MINIMUM ELONGATION = 8%

A SAMPLE FROM EACH BATCH WILL BE PULL TESTED TO ASTM STANDARD B221 BY AN APPROVED TESTING FACILITY TO ENSURE THAT THE BATCH MEETS THE ABOVE MINIMUM MECHANICAL PROPERTIES

2) FINISH: N/A

3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED

4) UNITS: INCHES UNLESS OTHERWISE NOTED

5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX

6) IDENTIFICATION: IDENTIFY WITH DART B/N USING FINE POINT PERMANENT INK MARKER

7) WEIGHT: D2500-1 = 0.143 lb/in, D2500-3 = 0.066 lb/in

8) FOR D2500-1 PART NUMBER IS D2500-1-XXX WHERE XXX IS CUT LENGTH (EX. D2500-1-190 IS 190" LONG). D2500-1 EXTRUSION MANUFACTURED FROM:

- A) BON L DIE # 897105 -> PREFERRED
- B) CARADON MIDEAST DIE # PAH-28030
- C) CARADON MTL DIE # MH-18868

9) FOR D2500-3, PART NUMBER IS D2500-3-XXX WHERE XXX IS CUT LENGTH IN INCHES (EX. D2500-3-100 IS 100" LONG). D2500-3 EXTRUSION MANUFACTURED FROM:

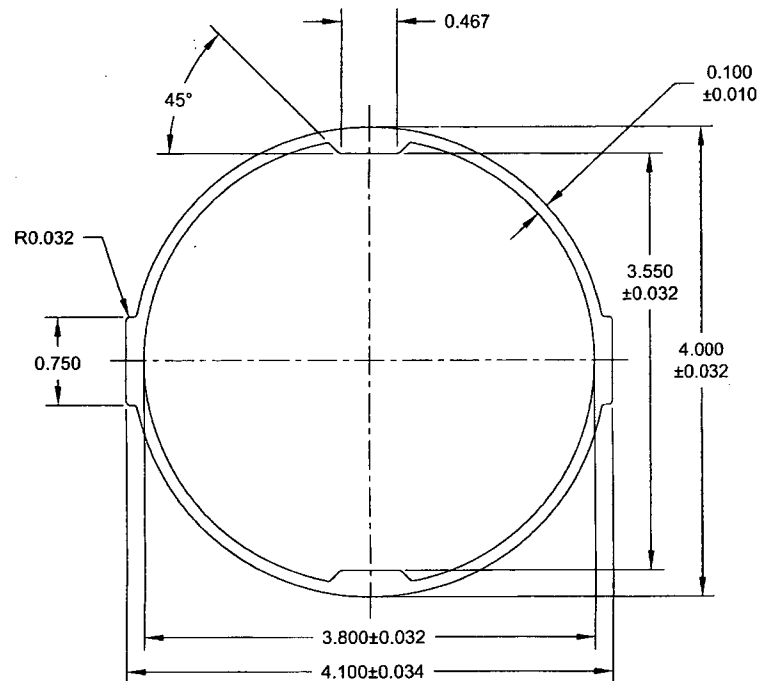
- A) CARADON INDALLEX DIE # MS-18867

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 66298
CL11102109

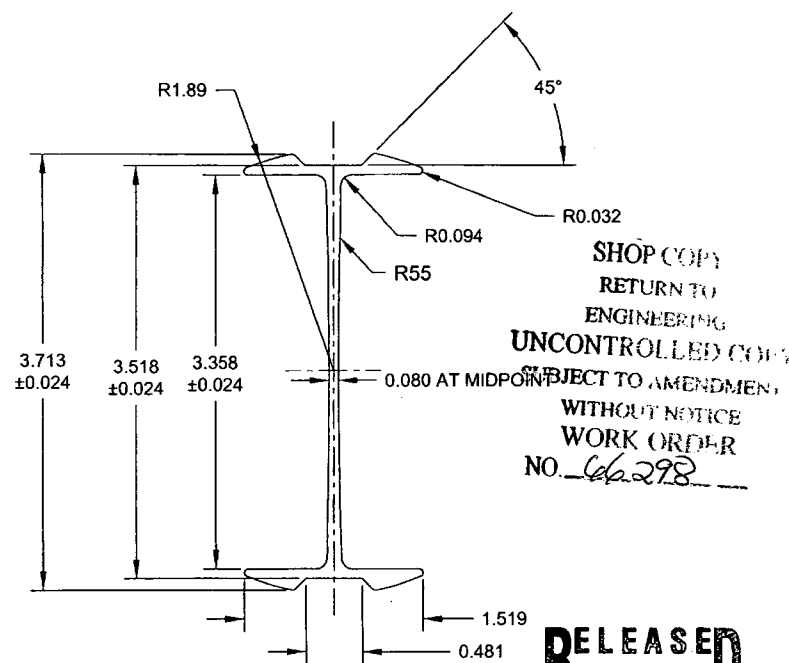
RELEASED
2010-02-02
MP

H	REDRAW & REFORMAT DWG; CORRECT BON L DIE # TYPO (ZN B8-1), ADD AMS & ASTM MAT'L OPTION (ZN D8-1), TOLERANCES NOW PER CARADON DWG (SHT 2)	CP	09.07.16
G	ADD DIE NUMBERS & 'DIMS IN INCHES' NOTES	PH	07.04.17
F	CHANGE MAT. TO 6061-T6	DS	97.09.29
E	CHANGE MATERIAL TEMPER	DS	96.10.24
D	ADD MATERIAL PROPERTIES	DS	96.10.07
C	ADD D2500-3 WEB	BW	96.04.26
B	CHANGE INTERNAL WEB	DS	96.03.24
A	NEW ISSUE	DS	96.03.19
REV.	DESCRIPTION	BY	DATE
DESIGN	4	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	9		
CHECKED	PH		
MFG. APPR.	MP		
APPROVED	MP		
DE APPR.	4	DRAWING NO. REV. H D2500 SHEET 1 OF 2 TITLE SCALE EXTRUSION NTS	
DATE	09.07.16	<small>COPYRIGHT © 1996 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

8 7 6 5 4 3 2 1



D2500-1



D2500-3

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SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 66298

RELEASED
2010-02-02
JAP

DESIGN	<i>[Signature]</i>	DART AEROSPACE LTD	
DRAWN	<i>[Signature]</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. H
MFG. APPR.	<i>[Signature]</i>	D2500	SHEET 2 OF 2
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	EXTRUSION	NTS
DATE	09.07.16	COPYRIGHT © 1996 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

8 7 6 5 4 3 2 1



Sapa Canada, Inc.
325 Rue Avro
Pointe Claire
Quebec
H9R-5W3
Tel: (514) 697-5120
Fax: (514) 694-8310

TO : DART AEROSPACE LTD
1270 ABERDEEN STREET
HAWKESBURY, ONT

K6A1K7

ATTENTION : CHRISTINA YOUNG
PHONE : (905) 000-0000
FAX : 16136321053

CONTACT :
PHONE : (514) 697-5120
FAX : (514) 694-8310
SALESPERSON :

PAGES : 2 (including this one)
REF # : 0730422
DATE : 02/15/11
TIME : 11:01

THE FOLLOWING OPEN ORDER REPORT SHOWS THE STATUS OF ALL YOUR ORDERS WITH SAPA CANADA.

IF YOU HAVE ANY QUESTIONS ON THESE ORDERS, PLEASE CONTACT THE NAME SHOWN ABOVE.

IF YOU WISH TO PLACE AN ORDER, PLEASE CONTACT YOUR SALESPERSON.

THANK YOU FOR YOUR BUSINESS.

15-Feb-11 11:48 Ref:0730422

2/2

REPORT ID: PPC042R

** CUSTOMER OPEN ORDER STATUS REPORT **

Branch: 2 2/15/11

USER ID: IXPROD2

FOR CUSTOMER: 201355 DART AEROSPACE LTD

DUE: 20100301 AND FORWARD

INSIDE REP: HOUSE

PAGE 1

11:01:36

P Due Date	Cust Part	P	Order	GR Cust P.O.	S	Die No.	E Ctrl Tms	Finish	Finish	UNITS	UNITS	WIP	UNITS	Ready	In	UNITS	F O	Ordered U	O
B	Number	R		CD	H	X No.	Prc	Colour	Length	To Extr	Stock	Sched	To Pack	To ship	Transit	Shipped	R U	UNITS	M V
2 11/04/06	AV06NS D2500-3-100	3	1020620	1 01 13459	MS	18867	37583	00	2540 MM	167							P	167	PC

**** END OF REPORT ****

SH-S=Hold

EX-C=DoNotExtrude

FR-Q=PDC S=COD C=COL P=PPD U=P/D T=T/P

OV-M=MultiVendor



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO13459

Purchase Order Date 2/09/11

PO Print Date 2/09/11

Page Number 1 of 1

Order From :

VC-SAP001

SAPA CANADA INC
LOCKBOX B9427
PO BOX 9100
POSTAL STATION F
TORONTO, ONTARIO M4Y 3A5
CANADA

Contact Name

Vendor Phone

800 563 5120

Vendor Fax

800 563 8310

Vendor Account Nbr

Buyer

Chantal Lavoie

Requisition Nbr

Tax Resale Nbr

10127-2607

Terms

Net 30

Currency

CAD

FOB

Destination-Collect

Ship To :

DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

FAKED
FCX 116 2/10

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	D2500-3-100P	Ext'n - I' Beam Web 4"	4/16/11 2/25/11 Yes	167.00 Each	Yours ppd	\$14.9700	\$2,499.99

Special Inst:

EXTRUDE AS PER DWG D2500 REV. H
B66298
MATERIAL: 6061-T6 (QQ-A-200/8)
MINIMUM YIELD TENSILE STRENGTH
= 35 KSI
MINIMUM ULTIMATE TENSILE
STRENGTH = 38 KSI
MINIMUM ELONGATION = 8%
100" LONG
CARADON INDALEX (SAPA) TOOL #
MS-18867
TO BE PACKED PER DSK 066
PULL TEST TO ASTM STANDARD B221
REQUIRED

PO Total:

\$2,499.99

MATERIAL CERTIFICATION
REQ'D UPON DELIVERY

Change Nbr: 1

Change Date: 2/09/11

No substitution or deviation without
consent.
Certificate of Conformity or Material
Certification required when applicable

PROFILÉS D'ALUMINIUM - ANODISATION - FABRICATION - PEINTURE
ALUMINUM EXTRUSIONS - ANODIZING - FABRICATION - PAINTING

Sapa Canada, Inc.
Adresse Postale 325, rue Avro
Pointe-Claire, Québec H9R 5W3
Téléphone: (514) 697-5120
Télécopieur: (514) 694-8310

sapa:

VENDU À / SOLD TO

EXPÉDIÉ / SHIP TO

INDICATIONS SPÉCIALES
SPECIAL INSTRUCTIONS

DART AEROSPACE LTD
1270 ABERDEEN STREET
HAWKESBURY, ONT

DART AEROSPACE LTD
1270 ABERDEEN STREET
HAWKESBURY, ONT

K6A1K7

K6A1K7

NOTRE NUMÉRO DE COMM.
OUR ORDER NO.

CERTIFIÉ
ISO 9001:2008

N° DU CLIENT / CUST. NO.		N° DE COMMANDE / ORDER NO.		DATE DE COMMANDE / ORDER DATE		NOTRE DATE DE COMMANDE / OUR ORDER DATE		CONDITIONS / TERMS	
201355		3459							
Vendeur / SALESMAN		C.A.D. / C.O.D.		F.A.B. / F.O.B.		EN BALLOTS / BUNDLED AND TAPED		CARTONNÉ / CARTONED	
201355				3459					
N° DE MATRICE / SAPA DIE NO.		DESCRIPTION DU CLIENT / CUSTOMER DESCRIPTION		ALLIAGE ET TREMPAGE / ALLOY AND TEMPER		LONGUEUR / LENGTH		PRIX UNITAIRE / UNIT PRICE	
167 M3 13867 D2500-3-100		F EXTRUDE ONLY							
1		199		167 M3 13867 D2500-3-100		6061 T6		2540	
				BUNDLE= 963755 963756 963757 9637					
We hereby certify that the material supplied meets the chemical properties as published by the Aluminum Association, and requirements of our Quality procedure									

R357314/50

PROJ:

Required Date:

DATE DE LIVRAISON / DATE SHIPPED		ENVOYÉ PAR / SHIPPED VIA		MONTANT / AMOUNT	
				OTTAWA 4 AVRIL	
COMMANDE / ORDERED	CETTE EXPÉDITION / THIS SHIPMENT				
POIDS / WEIGHT	PIÈCES / PIECES	BALLOTS / BOLS	POIDS / WEIGHT	PCES / PCS	
			4	517	189 POIDS EN KGS

325 rue Avro
Pointe-Claire, QC, Canada H9R 5W3
Téléphone (514) 697-5120
Fac-simile (514) 694-8310

sapa:

Rapport des propriétés mécaniques Mechanical Properties Test Report

Client / Customer : **DART AEROSPACE LTD**
Adresse / Address : **1270 ABERDEEN STREET
HAWKESBURY ONT,
K6A 1K7**

commande Sapa / Sapa order # : **1020620**

bon de commande / Purchase order # : **13459**

de matrice / Die # : **MS 18867**

Description : **D2500-3**

Alliage & trempage / Alloy & temper : **6061 T6**

Customer Part #: **D2500-3-100**

Contrôle / Control # : **37583-1**

Coulée / Cast # : **50775**

Subalop

	Min.requis Min.required	Résultat actuel Actual results
Tension ultime Ultimate stress (psi)	38 000	43,662
Contrainte élastique Yield stress (psi)	35 000	40,528
% élongation dans 2" % elongation in 2"	8	13
Dureté Rockwell E (hre) Rockwell E Hardness (hre)	88 @ 100	91

Composition chimique typique / Typical chemical composition :

	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti
6063	0,20 - 0,60	0,35 Max	0,10 Max	0,10 Max	0,45 - 0,90	0,10 Max	0,10 Max	0,10 Max
6005	0,60 - 0,90	0,35 Max	0,10 Max	0,10 Max	0,40 - 0,60	0,10 Max	0,10 Max	0,10 Max
6005A	0,68 - 0,72	0,15 - 0,27	0,08 - 0,12	0,20 - 0,24	0,48 - 0,52	0,03 Max	0,05 Max	0,03 Max
6061	0,40 - 0,80	0,70 Max	0,15 - 0,40	0,15 Max	0,80 - 1,20	0,04 - 0,35	0,25 Max	0,15 Max
6351	0,7 - 1,3	0,5 Max	0,10 Max	0,40 - 0,80	0,40 - 0,80	---	0,20 Max	0,20 Max

Nous certifions que le matériel fourni rencontre les exigences chimiques telles qu'annoncées par la norme ASTM B-221 excepté pour la section 8.2 (nombre de spécimen) et AMS QQA 200/8 excepté pour la section 4.2.3.1 (nombre de spécimen) qui sont déterminés par les exigences du client.

We hereby certify that the material supplied meets the chemical properties as published by the ASTM B-221 except for section 8.2 (number of specimen) and AMS QQA 200/8 except for section 4.2.3.1 (number of specimen) which is determined by customer requirement.

Sincèrement vôtre,
Yours truly,

date : **2011-03-28**



Gilles Pelletier
Technicien de la qualité
Quality technician

